Published January 29, 2007

Survey explores spawning habitat for forage fish

by john Dodge
by john Dodge

D u PONT - The search was on last week to determine whether forage fish critical to South Sound salmon recovery frequent some of the 23 miles of South Sound beaches that stretch from Point Defiance south to the Nisqually River Delta.

The subjects in the forage fish survey are Pacific sandlance and surf smelt, two thin, 8- to 9-inch fish that lay their eggs on sandy beaches near the high-tide line.

The fish, along with Pacific herring, are a key food for salmon and a good indicator of overall beach health.

The survey is headed up by the South Puget Sound Salmon Enhancement Group with help from the Nisqually Tribe. It's part of a larger, $300,000 project to assess the nearshore habitat between Point Defiance and the Nisqually Delta.

Once the assessment is completed, the salmon enhancement group will seek funding to pursue two or three habitat-restoration projects with willing landowners.

"When you're doing salmon-restoration work, it's good to know where the forage fish spawning habitat is," said Sayre Hodgson, a tribal research biologist helping enhancement group project manager Kristin Williamson survey the beaches for eggs laid by the two tiny fish species.

The data can be used to make sure a salmon-

restoration project complements forage fish spawning habitat, rather than alter it in a harmful way.

The field work, which included a stop at Solo Point across from Ketron Island near DuPont last week, involved scooping up bags full of sand and pea gravel from the beach near the high-tide line, then taking it back to a laboratory to look for signs that the fish have been there spawning.

The eggs are so small, only a trained or microscope-aided eye is likely to see them, Williamson said.

Several beach samples along the 23-mile stretch have produced eggs, Williamson said.

The salmon-enhancement group is carrying on some of the pioneer forage fish survey work in Puget Sound started more than

30 years ago by state Department of Fish and Wildlife fisheries biologist Dan Penttila and co-workers.

When the surveys began, fisheries biologists assumed that only about 40 miles of Puget Sound beach served as surf smelt spawning habitat, Penttila said in an earlier interview.

But the more they looked, the more spawning habitat they found - about 250 miles of Puget Sound beaches, or about 10 percent of the total Puget Sound shoreline. About

25 percent of the surf smelt spawning beaches are in South Sound, Penttila said.

"We're trying to supplement the work done by Fish and Wildlife," Williamson said.

"This is a shoreline that hadn't been sampled before," Hodgson said.

Because the recovery plan for Nisqually River chinook relies heavily on nearshore, estuary and river habitat improvements, the forage fish survey is especially important to the tribe, Hodgson said.

Project manager Kristin Williamson measures a section of Solo Point shoreline for selected sampling (Steve Bloom/Olympian)

Kristin Williamson (L) and Sayre Hodgson tag a shoreline sediment sample collected by **Washington Conservation Corp member** Sarah Clarke during testing at Solo Point. Steve Bloom/The Olympian